REMARKS

Claims 25-47 are pending in this application. Claim 25 has been amended to incorporate limitations of Claims 26, 32, and 33. Claim 38 has been amended to incorporate limitations of Claims 39 and 42 along with subject matter, found in the Substitute Specification, for example, at paragraphs [0037] and [0038]. Further, Claim 47 has been amended. Support for the amendments to Claim 47 can be found in the Substitute Specification, for example, at paragraphs [0037] and [0038]. Claims 28, 34, 37, 44, and 46 have been amended for clarity and/or consistency with the remaining claims. Claims 26, 32-33, 39, and 42 have been canceled, leaving claims 25, 27-31, 34-38, 40-41, and 43-47 for examination. Applicants respectfully request allowance of the present application in view of the foregoing amendments and remarks.

Claims 25-47 were rejected as being anticipated by U.S. Published Patent Application No. 2006/0259157 to Lo et al. ("Lo") under 35 U.S.C. 102(e). As amended, independent Claims 25, 28, and 47 are directed to a method, device, and computer program implementing a method for executing a program for an industrial automation system. The claimed invention differs from the disclosure of Lo in that Lo is principally concerned with providing centralized access to numerous engineering tools for programming code and not executing the code as in the claimed invention. As such, Lo is wholly silent as to particular elements of the claimed invention as set forth below.

More particularly, Lo is directed to providing a plurality of engineering tools at a centralized web server, having the user write programming code using the tools, and downloading the code to a programmable controller. In this way, a plurality of users may write programming code using the same version of software, for example, and may more easily work on collaborative projects, for example. At paragraph [0048], Lo discloses engineering tools for generating programming code that reside on a web server and are capable of operating on a web-client in a browser application. A user accesses the web server over a network with a client device, i.e. personal computer, to access the engineering tool. The engineering tool is web-enabled, and, in its most basic form, comprises an editor or editors that may be run on the web-browser by the user. According to Lo, at paragraph [0050], the transmission between the client and the server is preferably in the form of an XML document. Regarding any steps after

generating the code, at paragraphs [0057] – [0062], Lo simply discloses that "[a]fter the code is created, debugged, and compiled, it is downloaded to a programmable controller....[I]n one embodiment programming a program controller comprises two steps: establishing communication between the controller and the server...and downloading the programming code to the controller over the network." As a result, to put it simply, where the disclosure of Lo essentially stops, the claimed invention picks up. For this reason, Lo is wholly silent as to the following claimed elements that teach how to execute the programming code.

For example, amended Claim 25 now requires, in part, a method for executing a program for an industrial automation system, comprising:

... loading the machine-independent program in the form of the hierarchical tree into the corresponding components of the automation system, wherein the corresponding components of the automation system execute the or each machine-independent program present in the form of the hierarchical tree with the aid of at least one object machine assigned to the corresponding components of the automation system, and wherein the at least one object machine provides operators and objects from which the machine-independent program is provided in the form of the hierarchical tree; and

during or after loading of the machine-independent program, instantiating the operators using the at least one object machine into corresponding components of the automation system; and

converting the symbolic representation of the hierarchical tree to physical addresses to generate a loadable program in the form of an executable program or operator tree.

Upon review and consideration of the Lo reference as a whole, Lo is wholly silent as to at least the elements: "during or after loading of the machine-independent program, instantiating the operators using the at least one object machine into corresponding components of the automation system"; and "converting the symbolic representation of the hierarchical tree to physical addresses to generate a loadable program in the form of an executable program or operator tree." Applicants note the functions disclosed in paragraph [0053] of Lo, such as a "symbols editor for defining symbolic designations," are user-friendly functions of the engineering tools that may be used to create the programming code and do not teach or suggest

"during or after the loading of the machine-independent program instantiating the operators using the at least one object machine into corresponding components of the automation system"; or "converting the symbolic representation of the hierarchical tree (i.e. the XML code of Lo) to physical addresses to generate a loadable program in the form of an executable program or operator tree." In view of the above, Claims 25, and all Claims dependent thereon are in condition for allowance.

Further, for the reasons set forth above with respect to Claim 25, Lo does not teach or suggest the elements of Claim 38 as amended, namely Lo is wholly silent as to at least "a component to instantiate the operators during or after loading of the machine-independent program" and "a component to convert the symbolic representation of the hierarchical tree to physical addresses to generate a loadable program." Accordingly, Claim 38, and all claims dependent therefrom, are also in condition for allowance.

Moreover, Claim 47, requires computer program implementing a method for executing a program for an industrial automation system, comprising:..."during or after loading of the machine-independent program, instantiating the operators using the at least one object machine into corresponding components of the automation system" and "converting the symbolic representation of the hierarchical tree to physical addresses to generate a loadable program in the form of an executable program or operator tree." For the reasons provided above with respect to Claim 25, Claim 47 is also in condition for allowance.

The dependent claims provide further reason for allowance.

Claims 34 and 44 each require that "the object machine is implemented as a function unit that is closed and that processes the hierarchical tree to a runtime." Claims 34 and 44 provide further reason for allowance because Lo, including paragraphs [0047]-[0048] cited by the Examiner, is wholly silent as to an object machine that is implemented as a function unit that is closed and that processes a hierarchical tree to a runtime.

Claims 37 and 46 require that the objects of the machine-independent program present as a hierarchical object or operator tree are assigned a collection of infrastructure services or infrastructure functions that access the objects via containers assigned to the objects such that an infrastructure service or an infrastructure function can be used by all the objects. As set forth in paragraph [0033], by so doing, "[i]nfrastructure services or corresponding functions are accessed via the container 32 and such access is the same for all objects in the hierarchical tree." Lo is wholly silent as to any containers, and moreover containers assigned to objects such that an infrastructure service or an infrastructure function can be used by all the objects. As a result, Claims 37 and 46 provide further reasons for allowance.

Conclusion

Accordingly, Applicants submit that all claims are in condition for allowance and requests a Notice of Allowance be issued. The commissioner is hereby authorized to charge any appropriate fees due in connection with this paper, including the fees specified in 37 C.F.R. §§ 1.16 (c), 1.17(a)(1) and 1.20(d), or credit any overpayments to Deposit Account No. 19-2179.

Respectfully submitted,

Dated: _____9/28/07_____   By: _____

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